

ABSTRACT

Long Term Evolution (LTE) has engaged the attention of wireless operators, investors, and industry watchers around the world in the late years. LTE was initiated by Third Generation Partnership Project (3GPP), to maintain its competitive edge in the world of mobile networks in the future; it represents the first generation of cellular networks to be based on a flat IP architecture.

Getting the most out of the network, meeting subscriber demands and developing new revenue growth plans, is business critical and one of the key drivers in the uptake of LTE as a new technology, so radio network planning is an essential process for operators looking to make the most of their networks. This thesis work is based on the initial phase of radio network planning known as dimensioning.

A Graphical User Interface (GUI) tool was designed and simulated by using MATLAB program to perform the dimensioning process in LTE network. Two phases of dimensioning are presented; coverage planning phase and capacity planning phase. The tool provides the number of sites required in both phases.